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GOLDEN AGE MINES

L I M I T E D



ASBESTOS FIBRE

ANNUAL REPORT AS AT JUNE 30TH, 1955

GOLDEN AGE MINES LIMITED

Incorporated under the laws of the Province of Ontario, 1911

OFFICERS

CHARLES SHIPMAN PAYSON	- - - - -	Chairman of the Board
JAMES A. ROBB	- - - - -	President, Managing Director and Treasurer
IRENE R. O'CROWLEY	- - - - -	Vice-President
ESMOND P. O'BRIEN	- - - - -	Vice-President
W. CLARKE CAMPBELL	- - - - -	Secretary

EXECUTIVE COMMITTEE

CHARLES SHIPMAN PAYSON	W. CLARKE CAMPBELL
JAMES A. ROBB	H. EMERSON MARTIN

DIRECTORS

WILLIAM ABBRUZZESE	- - - - -	Newark, N.J.
H. EMERSON MARTIN	- - - - -	Toronto, Ont.
ESMOND P. O'BRIEN	- - - - -	New York, N.Y.
IRENE R. O'CROWLEY	- - - - -	New York, N.Y.
CHARLES SHIPMAN PAYSON	- - - - -	New York, N.Y.
JAMES A. ROBB	- - - - -	New York, N.Y.
DAVID H. RUSSELL	- - - - -	St. Petersburg, Fla.

GEOLOGIST

PAUL H. LACHANCE, M.E.	- - - - -	Beauceville, P.Q.
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TRANSFER AGENTS AND REGISTRARS

Crown Trust Company	- - - - -	Toronto, Ont.
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AUDITORS

M. John Kerby, C.A.	- - - - -	Toronto, Ont.
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HEAD OFFICE

85 Richmond St. W.	- - - - -	Toronto, Ont.
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SOLICITORS

Day, Wilson, Kelly, Martin & Morden	- - - - -	Toronto, Ont.
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DIRECTORS' REPORT

To the Shareholders:

Your Directors herewith submit the Annual Report of your Company for the period ending June 30, 1955 together with reports of the Managing Director and Engineer-Geologist; also Balance Sheet with Statement of Expenditures and related data.

A further acquisition subsequent to date of this report of 56,433 shares of stock of the Standard Asbestos Co. Ltd., has been effected making a total now owned 290,524 shares.

Again during the past year such funds as have been required for exploration and development have been provided by your Directors and at a meeting in May when the treasury faced the immediate need of funds for further work a private subscription, by your Directors, of \$22,500. was arranged whereby, 150,000 shares of Capital Stock @ 15¢ per share was underwritten, with a proviso that each share subscribed would carry the right to buy 2 additional shares of treasury stock @ 25¢, good until May 10, 1956. Options outstanding at present are as follows:

125,000 shares to Charles S. Payson	Jan. 2, 1958 @ 50¢
125,000 " " James A. Robb	Jan. 2, 1958 @ 50¢
145,000 " " Directors	Jan. 2, 1958 @ 50¢
106,666 " " Charles S. Payson	May 10, 1956 @ 25¢
40,000 " " James A. Robb	May 10, 1956 @ 25¢
73,334 " " David H. Russell	May 10, 1956 @ 25¢
40,000 " " E. P. O'Brien	May 10, 1956 @ 25¢
20,000 " " Wm. H. Abbruzzese	May 10, 1956 @ 25¢
20,000 " " I. R. O'Crowley	May 10, 1956 @ 25¢

Subsequent to June 30, 1955 the following Treasury stock was sold.

Charles S. Payson took down	55,000 @ 50¢
	10,000 @ 25¢
James A. Robb took down	40,000 @ 25¢
	24,000 @ 50¢

***Note:** In 1952 sale to Directors of 200,000 shares of Treasury stock was authorized @ 50¢ per share for one year, said authorization being extended until Jan. 2, 1958 and of this 200,000 shares, 134,000 have been issued to directors against personal advances to the treasury.

Submitted on behalf of the Board,

CHARLES SHIPMAN PAYSON,
Chairman.

Dated at New York, N.Y., September 16, 1955.

PRESIDENT'S REPORT

The Chairman and Directors,
Golden Age Mines Limited,
85 Richmond St. W.,
Toronto, Ont.

Gentlemen:—

I herewith submit report of operations for the year 1954 and up to June 30th, 1955.

This annual report treats your Company's properties and those of Standard Asbestos Mines Limited as an integrated unit. Your Company has options to purchase a total of 900,000 shares of the 1,168,700 presently issued capital of Standard Asbestos.

The work done by our Engineer-Geologist, Mr. Paul H. Lachance has been most enlightening and has forced a complete change of concept of your property in that the new maps so ably prepared, have destroyed the dyke and anomaly interpretations on which we have previously relied and now points strongly to the fact that the area of possible fibre deposition was very much larger than we at any time had supposed.

The new Geophysical work strongly confirms the report of Mr. J. Obalski, (1906) an extract of which is made a part of this report.

It might be well to point out that the report of Mr. Lachance, attached hereto, covers only his evaluation of the area affected by the bulk test made at Coleraine, P.Q. and is in no sense an overall estimate of possible total tonnage on the Golden Age property. Also that the additional drilling recommended by him is for the purpose of definitely delineating and proving the presently indicated ore deposition by a series of vertical holes.

Diamond drilling to date has revealed fibre in varying amounts in all parallel holes up to Hole #36 which is located about 7,500 feet North East of Highway #23. Reference to the report of Mr. Parker D. Pitts of 1954 shows his estimate of 11,500,000 tons between Holes #26 and #31A and it is noteworthy that D.D. Hole #26 produced a grade of 3Z fibre on core milled by the Quebec Department of Mines. His recommendation to Bulk Sample this area has not as yet been carried out but should be given consideration.

While sufficient tonnage has been put in sight to sustain a mill of 2,000 tons daily capacity for a period of from 10 to 14 years on the River Section, the new maps confront us with a much greater additional exploration problem than has ever heretofore been contemplated. It is quite apparent that instead of working on a dyke structure and other non related anomalies, that we have here a massive deposit of serpentine asbestos rock on lots 300 to 302 inclusive, largely covering an area of 1,800 feet by 4,800 feet. An explorable area of such magnitude, together with our own geophysical confirmation of the Obalski report leads strongly to the belief in the existence of a very large tonnage of slip fibre with the possibility of discovering a concentrated deposit of cross fibre.

Mining costs would be at a minimum on account:—

- (A) Plentiful supply of labour.
- (B) Light overburden.
- (C) Topography:— Gradients as described in the Annual Report of 1954.
- (D) Availability of power, (2 lines crossing property).
- (E) With shipping warehouse located between, Right of Way of Quebec Central Railway and Main Highway #23, finished product can be loaded economically by either Rail or truck.
- (F) Economic availability of water borne transportation, property being located on main highway about 46 miles from the docks at Levis, P.Q.

Several end users have made fibre tests and have pronounced the quality good.

Work has been actively carried on during the period under review and much credit is due to Mr. Paul Lachance for the good progress reported herein and I wish to thank him and all others who have so loyally supported the project.

Respectfully submitted,

JAMES A. ROBB,

President and Managing Director.

Dated at New York, N.Y.,
September 16, 1955.

EXTRACT FROM REPORT

OF J. OBALSKI, M.E.

Formerly Superintendent of Mines for the Province of Quebec

ASBESTOS

A belt of serpentine may be seen on the N.W. side of the Plante River, running in a N.E. direction and crossing the whole property. That serpentine has been prospected in a few places with the following results:

At the N.E. end, on the unsurveyed block, the serpentine outcroppings form a hill about 150 ft. above the surrounding grounds, on which the serpentine exposed covers about four acres in superficies. This serpentine is shaley and fibrous and compares favorably with the fibre producing material mined in the Broughton district, where several important mills are in operation. A small opening has been made on the side of the hill, 6 x 15 and 15 feet deep, disclosing a large quantity of fibrous serpentine. The serpentine is bounded to the N.W. by a big granite hill and extends toward the S.W. for a distance of three-quarters of a mile, with a width of more than 1,000 feet as per the outcroppings.

On the lot 300 of Range St. Charles, about three miles S.W. of the above mentioned prospect, the serpentine outcrops again, and several openings have been made, showing a good quality of serpentine, a little different from the first one but containing many veins of Asbestos up to $\frac{3}{4}$ of an inch wide; the serpentine is in sight for a distance of over a mile and extends in a transversal way for distances varying from 200 to 1,500 ft. and possibly more, the ground being covered with timber.

To the S.W. quite a large opening has been made by another Company, showing a good serpentine, partly compact, with numerous veins up to $1\frac{1}{4}$ inch, and partly shaley and fibrous.

Going N.E. about $1\frac{1}{2}$ miles further than this point, some prospecting has been done on the lot 458 of St. Gaspard, showing good serpentine with veins of Asbestos covering a width of about 1,500 feet of fibrous serpentine.

Asbestos bearing serpentine is also in sight and has been opened up to the S.W., close to the public road near the railroad, where the Serpentine Belt crosses the Plante River.

If we take into consideration the preceding facts, we see that a belt of serpentine runs through the property for practically all its length — four miles— with a width from a few hundred feet to 1,500 feet, and very likely more, as part of the territory is yet unprospected, being covered by timber and dirt. This belt of serpentine has been opened up at several places by only small openings and shows a good material, sometimes compact with small veins and sometimes shaley and fibrous, being comparable with the material of the Broughton district.

The area covered by this belt is then considerable; the distance to the railroad (Q.C.R.), varying from half a mile to four miles at the farthest end of the property; it is easily accessible by wagon roads, the ground is undulated, the serpentine hills not exceeding 100 or 150 feet above the surrounding ground, and the highest point at the N.E. end being only 300 feet above the railroad track, which gives a fair down grade, the distance to the same being four miles; of course there is already a good road for carting timber.

The property being crossed by two rivers, Plante and Callway, a sufficient amount of water exists there for the requirements of the mines and mills which may be erected.

An electric line, taking the power at the falls of the Chaudiere River, passes through the property and may supply the necessary power.

The serpentine of this district has the same character as the one of Broughton, Thetford and Black Lake and is situated on the same line or belt.

BALANCE

As at June

GOLDEN AGE

(Incorporated under the law of the Province of Ontario)

ASSETS

Investments (at cost):

234,091 escrowed shares of Standard Asbestos Mines Limited \$ 22,000.00

(The company holds options to purchase an additional 665,909 escrowed shares of Standard Asbestos Mines Limited for \$62,687.50 until September 1, 1955)

Mining Properties (at cost):

One Patented Mining Claim in the Township of Tisdale, Ontario for a consideration of 1,999,900 shares of the capital stock of the company at a valuation of \$ 999.95

Seven unpatented Mining Claims in Beauce County, Quebec for a consideration of 750,000 shares of the capital stock of the company at a valuation of 75,000.00

Option to Purchase Four Unpatented Mining claims in Beauce County, Quebec granted to the company for a consideration of 50,000 shares at a valuation of 10 cents per share and renewed for a consideration of \$300.00 5,300.00

(This option may be exercised by the issuance of a further 150,000 shares of the capital stock of the company on or before April 22, 1956)

Option to Purchase Four Unpatented Mining Claims in Beauce County, Quebec 10.00 81,309.95

(This option may be exercised by the payment of an additional \$200,000.00 to Standard Asbestos Mines Limited by September 1, 1955)

Deferred:

Head Office, General and Administrative Expenses \$ 23,264.80
Mine Office, Exploration and Development Expenses 127,642.94
Organization Expenses 3,640.42 154,548.16

Approved on behalf of the Board:

CHARLES S. PAYSON, Director.

JAMES A. ROBB, Director.

\$257,858.11

SHEET

30, 1955

MINES LIMITED

of the Province of Ontario)

LIABILITIES AND CAPITAL

Current:

Overdraft at Banks	\$ 1,729.47	
Accounts Payable and Accrued Liabilities (Legal fees for the period from January 1, 1954 to June 30, 1955 have not been determined)	3,890.52	\$ 5,619.99

Advances by Directors:

Mr. C. S. Payson	\$ 27,534.92	
Mr. J. A. Robb	23,138.25	
Miss Irene O'Crowley	2,000.00	52,673.17

(These directors have the right to convert the above advances into capital stock subscriptions at 50 cents per share, which right shall expire January 3, 1958)

Capital:

Authorized: 5,000,000 shares without par value.

Issued:

For Cash	620,100 shares	\$115,005.00	
For Services	125,600 shares	3,560.00	
For Claims and Options on Claims	2,799,900 shares	80,999.95	
Total Issued	3,545,600 shares		199,564.95

Note 1: Since December 31, 1953, there have been 250,000 shares of the capital stock issued for cash in the amount of \$52,500.00 and 50,000 shares of the capital stock at a valuation of \$5,000.00 issued for an option on mining claims.

Note 2: Certain directors of the company hold options to purchase a total of 300,000 shares of the capital stock of the company at 25 cents per share exercisable on or before May 10, 1956.

Note 3: Messrs. C. S. Payson and J. A. Robb, directors, hold options to purchase 125,000 shares each of the capital stock of the company at 50 cents per share, exercisable on or before January 3, 1958.

Note 4: Contingent Liability.

In a Writ issued in the Supreme Court of Ontario, the company has been named as one of the defendants in an action which concerns a total of 150,000 shares of the capital stock of the company which the plaintiff claims were wrongfully converted by the individual defendants. The relief claimed is the return of the 150,000 shares and damages for negligence and breach of duty in respect of the transfer of the said shares. The company's solicitors are of the opinion that the only liability which may be incurred by the company would be for such legal costs as may arise through its defence of the action. The company does not admit any liability and no provision has been made for any liability.

\$257,858.11

AUDITOR'S REPORT

To the Shareholders of
Golden Age Mines Limited:

I have examined the balance sheet of Golden Age Mines Limited as at June 30, 1955 and the statement of deferred expenses for the period ended on that date. My examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as I considered necessary in the circumstances.

In my opinion, the accompanying balance sheet and statement of deferred expenses are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the company as at June 30, 1955 and the results of its transactions for the period ended on that date, according to the best of my information and the explanations given to me and as shown by the books of the company.

M. JOHN KERBY,
Chartered Accountant.

August 18, 1955.

Statement of Deferred Expenses for the Period from Incorporation

JULY 14, 1911 TO JUNE 30, 1955

	Total to December 31, 1953	For the Period from January 1, 1954 to June 30, 1955	Total to June 30, 1955
Head Office, General and Administrative Expenses:			
Bank Charges	\$ 163.44	\$ 90.30	\$ 253.74
General Expenses	930.55	13.30	943.85
Licenses, Recording Fees and Provincial Taxes	365.43	338.61	704.04
Legal and Audit	5,620.51	1,091.00	6,711.51
Printing and Stationery	901.98	.....	901.98
Qualification Expenses and Share Certificates	450.00	394.60	844.60
Rent (Office)	100.00	.....	100.00
Services pertaining to purchase of mining claims and obtaining options on shares	4,135.00	.....	4,135.00
Shareholders' Information and Publicity	2,367.75	764.93	3,132.68
Transfer Agents' Fees and Expenses	2,032.80	855.89	2,888.69
Travelling	813.31	1,835.40	2,648.71
	<u>\$17,880.77</u>	<u>\$ 5,384.03</u>	<u>\$ 23,264.80</u>
Mine Office, Exploration and Development Expenses:			
Analyses and Sampling	\$ 897.87	\$ 2,594.78	\$ 3,492.65
Drilling	20,022.26	14,223.29	34,245.55
Engineers' Fees, Salaries and Expenses	5,049.72	9,258.70	14,308.42
General Exploration and Development	2,500.00	.....	2,500.00
Magnetometer Survey	319.30	525.00	844.30
Miscellaneous	552.41	232.52	784.93
Rent of Mill and Cost of Bulk Sample Tests .....	.....	14,614.74	14,614.74
Rental of Equipment for Surface Exploration	2,038.00	971.05	3,009.05
Supplies and Equipment	6,258.55	443.19	6,701.74
Surface Exploration and Excavation	1,960.86	7,693.34	9,654.20
Taxes on Property	2,675.21	210.11	2,885.32
Telephone and Telegraph .....	.....	1,537.10	1,537.10
Travelling and Accommodation	10,521.17	8,142.49	18,663.66
Trucking of Ore Samples	3,762.25	3,608.11	7,370.36
Unemployment Insurance	48.74	102.26	151.00
Wages	4,282.36	2,529.12	6,811.48
Workmen's Compensation	527.47	152.41	375.06
	<u>\$61,416.17</u>	<u>\$66,533.39</u>	<u>\$127,949.56</u>
Less: Sale of Gravel from Property	277.92	28.70	306.62
	<u>\$61,138.25</u>	<u>\$66,504.69</u>	<u>\$127,642.94</u>

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REPORT ON BULK SAMPLING

Of The Quebec Holdings

By: PAUL H. LACHANCE, P.Eng., Engineer Geologist.

JULY, 1955

Summary

The choice of the area in which to do the bulk sampling was made from the results obtained by sampling the diamond drill cores combined with the sampling of asbestos bearing rock taken from the outcrops found on the banks of the Des Plante river at the western end of the property, approximately 1,000 feet from highway 23.

Overburden was excavated by means of bulldozers, using explosives for the last few feet in pit No. 7, where overburden was 50 feet deep. Approximately 2 feet of surface rock were blasted and taken out before blasting for the samples.

It was intended to take out 300 tons out of four pits. Two pits were done on each side of the river and the tonnage extracted totalled about 1160 tons for the four pits.

The rock extracted was trucked to the mill of the Continental Asbestos, located in Coleraine, 7 miles southwest of Black Lake.

The actual milling of the rock started on June 1st to end on June 18th.

The feed into the mill circuit was variable but it averaged about 8 tons an hour. A total of 1,053.44 tons were milled.

The total cost of the complete operation was approximately \$24,000.00 including \$12,000 for rental of the mill.

The milling of the asbestos bearing rock gave a total of 1.76% average fibre recovery for the four pits. This fibre was of the grades 3R to 7R. The higher percentage of the fibre was in the low grades. Rotap analysis showed that the recovery could be higher with a proper mill adjusted to low grade fibre. It is estimated that a recovery of 7 to 8% fibre could be obtained from the type of ore found in this part of the property.

The value of the ore treated was estimated at \$4.08 including values of 7M fibre calculated for the % obtained for the tailings with the rotap analysis.

Location and Access

The four pits are within 1,500 feet from the highway. Pits No. 3 and No. 8 are on the northern side of the Des Plante river while No. 7 and No. 9 are on the southern side. (See sketch map).

A farm road on lot 16 joining the highway close to the northern side of the bridge, leads to all four pits. The road forks about 500 feet from the highway, one branch leading to the river bank, the other towards the range line, in a northeasterly direction. From this last branch, a side road leads to pit No. 8. Pit No. 3 is at the end of the first branch following the river bank. To go to pit No. 7, and No. 9, the river must be crossed, which is easily done in dry weather. A farm road on lot 17 leads to pit No. 7 but it is not in very good condition and with light rain it becomes very slippery thus not recommendable.

Procedure (Pits)

Work to remove overburden was started on pit No. 7. It was expected that in the higher elevation, the depth of the overburden would be 30 to 35 feet maximum. This was estimated from D. D. H. No. 44. The depth

REPORT ON BULK SAMPLING continued

at the bottom of the hill was 16 feet, as found in D. D. H. No. 43, located under the pit. Overburden was nearer to 50 feet at the top of the hill.

Three bulldozers were used to remove the overburden in pit No. 7. To increase the efficiency of one of the bulldozers, it was fitted with pointed grips working on the back leg of the run.

The last 6 feet of hard pan were drilled with a plug hammer drill, spacing the holes every 5 feet and also drilling an additional 2 feet in the rock in order to obtain a good blast.

The pit was made 85 feet wide at the top and 60 feet at the bottom of the hill by a length of 250 feet. Small benches were left at approximately each 20 feet in depth for the first 40 feet. The slope was close to 40° from the top of the hill to the first bench. The area of rock exposed for sampling was 75 feet by 30 feet.

While this work was going on, the other pits, No. 8, No. 9 and No. 3 were cleaned out by using one or two bulldozers from pit No. 7 whenever required. Overburden was only 10 feet in pits Nos. 8 and 9. Pit No. 3 had already been cleaned down to a couple of feet of overburden remaining on the serpentine.

The procedure of work was as follows:

- (a) Removal of overburden
- (b) Drilling and blasting the weathered rock.
- (c) Cleaning out the rock blasted in (b)
- (d) Drilling to a depth of 10 feet where possible and blasting ore.
- (e) Loading in trucks with a tractor-shovel.

At pit No. 8, the first 20 feet of rock were removed before it was possible to get unweathered rock.

Loading and Transportation

The use of a power shovel for loading the rock was not practical as the trucks could not be driven into pits No. 7 and No. 8. The tractor shovel on tracks was ideal for our operation and it was used most economically.

Four 3-ton trucks were hired to bring the rock from the property to the mill at Coleraine. The average load per truck was ten tons. Some difficulties were encountered at pit No. 7, but no long delays occurred. Weather permitting, when the rock was blasted, and taken out until the tonnage was completed for each pit. Two trips per day was the maximum allowed without overworking the truck drivers.

At the mill site, each truck was weighed on an outdoor scale both when loaded and empty. Then the rock was dumped in a separate pile for each pit. Before loading the rock into the crusher, it was weighed again to control the tonnage put through the mill.

Cost of Whole Operation

The total cost of the bulk sampling of the asbestos bearing rock came to \$24,303.38.

Mill —	Rental	\$ 12,000.00
	J. J. Denovan (Wages)	950.00
	Jute Bags	397.83
	Screens	228.36
	Denovan Fiberizer	152.78
	Paper bags	120.00
	Telephone	39.84
		<hr/>
		\$ 13,888.81

Transportation	—	Rock	3,483.11
		Fibre	125.00
			<hr/>
			\$ 3,608.11
Pits	—	Bulldozers	4,389.00
		Tractor shovel	968.63
		Wages	577.50
		Compressor	441.98
		Explosives	318.71
		Pump	97.14
		Analysis	13.50
			<hr/>
			\$ 6,806.46
		GRAND TOTAL	<hr/>
			\$ 24,303.38

Every effort was made to keep the cost at a minimum, throughout the whole operation. The writer supervised every phase of the work whenever possible and acted as timekeeper for the work done on the property.

The expenses incurred by Mr. J. A. Robb and the salary and expenses of the writer are not included in this amount.

Milling

The mill owned by the Continental Asbestos located in Coleraine, was rented to test the asbestos bearing rock extracted from the four pits dug on the company's property, in the Beauceville area. It has a capacity of approximately 350 tons per day.

The Lake Asbestos Co. had just completed milling approximately 25,000 tons of asbestos bearing rock, so the mill was in good order when it was taken over by this company. A few minor changes were made such as renewing certain screens and adding canvas sheets in the dust bin to obtain a better recovery of floats.

Before starting the actual test, a trial run was made in order to adjust the mill to the type of rock containing slip fibre.

Rock from each pit was passed as a separate unit corresponding to the area being tested.

The grader machines were adjusted for fibre grades 4 to 7, as it was expected that the higher percentage of recovery would be in the low grades.

The feed at the head of the mill had to be adjusted regularly, however, it was found that from 5 to 8 tons per hour was the best tonnage to obtain a good recovery.

Samples of the different parts of the mill circuit were taken regularly as well as sampling the asbestos fibre continuously to maintain good grades of fibre. Bagging tests of the fibre were made at the end of each test while bagging the fibre.

Mr. J. J. Denovan, P. Eng. acted as expert during the test. Mr. J. A. Robb and the writer, were also present every day, representing the company. Mr. J. Savoie was the superintendent of the mill and did excellent work throughout the whole test.

During the last test, Pit No. 8, arrangements were made to install a Denovan Fiberizer to find out if this machine could improve the recovery of fibre. It proved to be beneficiary if installed in the circuit.

The test started on June 1st with only an 8 hour shift. After the second test, it was decided to add another 8 hour shift to speed up the work. The milling of the rock ended on June 18th and the mill was cleaned and restored to its original condition by June 23rd.

It must be noted that the dust chamber or bin, was not big enough to send all the air vents through it. Also there was no special equipment for dust except the canvas sheets put in at the beginning of the test to catch the fibre.

REPORT ON BULK SAMPLING continued

Results

The results obtained from this bulk sample can be classified under two headings:

(a) Mill recovery and (b) laboratory recovery.

(a) Mill recovery:

The fibre recovery obtained by milling the rock from the four different pits is as follows:

Pit No. 3 — 318.91 tons			
3R	270 lbs.	0.04%	
4Z	859 "	0.12%	
6D	2000 "	0.31%	
7D	2964 "	0.46%	
7M	5400 "	0.93%	
Dust	2300 "		
Unclassified	1362 "		
			1.86%
Pit No. 7 — 263.63 tons			
3R	32 lbs.	0.006%	
5R	535 "	0.10%	
7H	4010 "	0.76%	
7M	2769 "	0.52%	
Dust	4720 "		
			1.38%
Pit No. 8 — 181.2 tons			
5R	55 lbs.	0.015%	
5Z	948 "	0.26%	
7R	7903 "	2.18%	
Dust	3748 "		
			2.45%
Pit No. 9 — 289.7 tons			
3T	50 lbs.	0.008%	
4T	522 "	0.08%	
7D	7309 "	1.26%	
Dust	6827 "		
			1.34%

The average percentage for the whole test is 1.76%. The highest percentage are in the low grades and the mill was not adequately equipped with the proper screens to obtain the best results for low grade fibre. Mr. P. J. Wiser, who was responsible in part for the flow sheet on the Lake Asbestos test, said that the mill had been fixed for higher grade fibre. This statement, together with a few tests made on the different parts of the circuit, while the test was running, called for rotap testing of all the samples taken during each test.

(b) Laboratory recovery:

The results obtained with the rotap analysis of the different samples taken are shown in the appendices found at the end of the report.

The procedure followed for the rotap tests was:

- (1) Mix and quarter all samples of a kind for each pit.
- (2) Take out a uniform sample.

- (3) Put the sample through the Denovan Fiberizer.
- (4) Weigh 200 grams.
- (5) Rotap for three minutes.
- (6) Weigh the residue on each screen.
- (7) Take out fibre with a vacuum cleaner.
- (8) Weigh rock left on each screen.

Different meshes are shown on the result sheets due to tests being made by Mr. Denovan with screens of 6, 8, 10, 35, 65 and 150 meshes and tests made by the writer with screens of 10, 20, 28, 35, 65 and 100 meshes.

Every care was taken to find the true percentage throughout all the tests.

Together with these rotap tests, samples were taken to the laboratory of the Department of Mines of the Province of Quebec and to the Rubroid Asbestos Co. at Eden, Vermont, U.S.A.

Results obtained at the Quebec Department of Mines are:

Pit No. 3

Undersize screenings (Denovan Screen)

Weight of sample	101.5 lbs.
Weight of Recovered fibre	43.5 oz.
Percentage of recovered fibre	2.66%
Grade of recovered fibre	7M

Undersize screenings (Screen No. 6)

Weight of sample	101.0 lbs.
Weight of recovered fibre	16.2 oz.
Percentage of recovered fibre	1.00%
Grade of recovered fibre	7D

Pit No. 3

Tailings

Weight of sample	71.50 lbs.
Weight of recovered fibre	11.8 oz.
Percentage of recovered fibre	1.03%
Grade of recovered fibre	7K

Dust

Weight of sample	101.50 lbs.
Weight of recovered fibre	120.9 oz.
Percentage of recovered fibre	7.44%
Grade of recovered fibre	6D — 48.0 oz.
	7T — 72.9 oz.

Pit No. 8

Heads

	Before Denovan Fib.	After Denovan Fib.
Weight of sample	25 lbs.	25 lbs.
Weight of recovered fibre	21.1 oz.	17.5 oz.
Percentage of recovered fibre	5.27%	4.37%
Grade of recovered fibre	7F — 11.9 oz. 7T — 9.2 oz. (min.)	7F — 11.0 oz. 7R — 6.5 oz. (min.)

REPORT ON BULK SAMPLING continued

Undersize screenings (Denovan Screen)	Before Denovan Fib.	After Denovan Fib.
Weight of sample	24 lbs.	24.25 lbs.
Weight of recovered fibre	14.8 oz.	18.3 oz.
Percentage of recovered fibre	3.85%	4.71%
Grade of recovered fibre	7T — (max.)	7R — (min.)

Pit No. 8

Undersize screenings (Screen No. 6)	Before Denovan Fib.	After Denovan Fib.
Weight of sample	25 lbs.	24.75 lbs.
Weight of recovered fibre	11.0 oz.	10.1 oz.
Percentage of recovered fibre	2.75%	2.55%
Grade of recovered fibre	7R (min.)	7T (max.)

Tailings	Before Denovan Fib.	After Denovan Fib.
Weight of sample	25 lbs.	25 lbs.
Weight of recovered fibre	12.0 oz.	7.8 oz.
Percentage of recovered fibre	3%	1.95%
Grade of recovered fibre	7R	7R (max.)

Dust	
Weight of sample	24.50 lbs.
Weight of recovered fibre	12.0 oz.
Percentage of recovered fibre	3.06%
Grade of recovered fibre	7K (min.)

Tests were done to establish the percentage of humidity in the rock. It was found to be 8%.

Fibre Evaluation

Lot 1 — Pit No. 3

Weight	Grade	Price/T	Value
270 lbs.	3R	\$371.00	\$ 5.08
859 "	4Z	156.00	47.24
2,000 "	6D	78.00	78.00 + 2.69
2,964 "	7D	68.50	101.51
5,400 "	7M	40.00	108.00
108 " (Dust)	7T	37.00	1.91
34,310 " (Tailings) (7M)		40.00	686.40
			<hr/>
			\$1,030.83

312 tons — Value per ton of rock \$3.30

Lot 2 — Pit No. 9

Weight	Grade	Price/T	Value
50 lbs.	3T	\$348.00	\$ 8.70
522 "	4T	156.00	40.72
202.08 lbs. (Dust)	6D	78.00	7.88
7,309 lbs.	7D	68.50	250.33
305.85 lbs. (Dust)	7T	37.00	5.65
34,800 lbs. (Tailings) 7M		40.00	710.40
			<hr/>
			\$1,023.68

286 tons — Value per ton of rock \$3.58

Lot 3 — Pit No. 7

Weight	Grade	Price/T	Value
32 lbs.	3R	\$371.00	\$ 5.92
535 "	5R	110.00	26.75
4,010 "	7H	55.00	108.27
2,769 "	7M	40.00	55.38
434.24 lbs. (Dust)	7M	40.00	8.68
51,600 lbs. (Tailings)	7M	40.00	1,032.00
			<hr/>
			\$1,237.00

261 tons — Value per ton of rock \$4.74

Lot 4 — Pit No. 8

Weight	Grade	Price/T	Value
55 lbs.	5R	\$110.00	\$ 3.02
948 "	5Z	80.00	37.92
7,888 "	7R	39.00	153.82
615 " (Dust)	7M	40.00	12.30
31,140 " (Tailings)	7M	40.00	622.80
			<hr/>
			\$ 829.86

180 tons — Value per ton of rock \$4.61

AVERAGE VALUE per ton for all pits: \$4.06

To obtain the amount of lbs. shown for the dust, the percentage of fibre recovery obtained with the rotap tests was used on the total weight of dust cleaned out of the dust bin, for pits No. 7 and No. 8. For pits No. 3 and No. 9, results from the laboratory of the Quebec Department of Mines were used.

For the tailings, the weight of fibre recuperated plus the weight of the dust in the dust bin plus an equal amount for dust escaping through the air vents, were added together and deducted from the tonnage passed in the mill. Then the percentage found by the rotap analysis was used to obtain the figures shown in this evaluation.

To compensate for the dust and fibre lost through the air vents exhausting directly outside, the same tonnage as found in the dust bin was deducted from the tonnage fed into the mill for each pit. Then this new figure for tonnage was taken to calculate the value per ton of rock.

Conclusions and Recommendations

The bulk sample test of the asbestos bearing rock done at the mill of the Continental Asbestos Co. Ltd. has definitely proven that asbestos fibre of good quality and of different grades can be produced from the area controlled by the four pits dug on part of the property of the Golden Age Mines Ltd.

The percentage of recovery indicated by the tonnage of free fibre found in the milling of the rock does not show a commercial value. However, the laboratory analysis, proved that the fibre content of the rock is higher than found and with a mill properly equipped with a sufficient number of screens, some having meshes below 30, the percentage of recovery could be brought up to 8%.

Although the higher percentage of recovery was in the low grade fibres commonly called "shorts," the percentage of the groups 4, 5 and 6 will probably increase below the surface. This would be confirmed by analysing diamond drill cores from holes bored in a close diamond drilling program.

A few laboratory analysis were done on each sample but comparing the weight of these samples with the total tonnage of rock put through the mill, a greater number of these tests should have been done in order to obtain a more representative average. Consideration must be given to the precedent statement if the results of the analysis are to be used for a basis in planning further development.

The area covered by this bulk sample indicates a probable tonnage of five to seven millions tons of asbestos bearing rock with the same percentage of free fibre as found in this test. This tonnage should be proven by further diamond drilling and sampling of the cores.

If possible, it is recommended that more bulk sampling be done in a mill having a greater number of screens and a dust chamber equipped with dust bag collectors. The rock extracted for this sample should be taken at a

REPORT ON BULK SAMPLING continued

greater depth. If the rock is taken from different pits, it should be mixed and passed as one sample thus giving all the grades that can be made with this asbestos bearing rock and so determine the overall value of the ore.

As mentioned in the preceding paragraphs, a diamond drilling program is recommended to outline the tonnage of ore and value of fibre recovery.

Respectfully submitted,

PAUL H. LACHANCE, P. Eng.

Engineer Geologist.

Appendix "A"

Pit No. 3

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Heads

Mesh	Total	Rock	Fibre
6	1.6	1.6	TR
8	2.3	2.3	TR
10	5.9	5.7	0.2
20	25.5	24.4	1.1
35	44.7	38.8	5.9
65	52.1	45.2	6.9
150	42.2	41.5	0.7
Pan	28.1		
	<hr/> 202.4		<hr/> 14.6
% Fibre 7.3%			
Less 150			
mesh 6.9%			

Undersize Denovan Screen

Mesh	Total	Rock	Fibre
6			
8			
10	.5	.5	
20	.6	.6	
35	6.8	2.2	4.6
65	47.4	14.5	32.9
150	72.1	70.7	1.4
Pan	72.5		
	<hr/> 199.9		<hr/> 38.9
% Fibre 19.45%			
Less 150 mesh 18.2 %			
(About 8% of this material)			

Undersize No. 6 Screen

(Quebec Department of Mines Report)

BEFORE Denovan Fiberizer

Weight of sample	101 lbs.
Weight of fibre	16.2 oz.
% of Fibre .....	.1%
Grade of fibre	7D

Pit No. 3

Rotap analysis — 3 minutes on 200 grams.

Tailings

AFTER Denovan Fiberizer

Mesh	Total	Rock	Fibre
6	.8	.8	
8	2.0	2.0	
10	5.2	5.2	TR
20	25.6	25.6	TR
35	41.2	40.5	.7
65	52.1	41.7	10.4
150	42.0	39.3	2.7
Pan	31.3		
	200.2		13.8

% Fibre 6.9%
Less 150 mesh 5.5%

Dust

(Quebec Department of Mines Report)

BEFORE Denovan Fiberizer

Weight of sample	101.5 lbs.
Weight of Fibre	120.9 oz.
Grade	Weight %
6D	48 oz. 2.96%
7T	72.9 oz. 4.48%
	<hr/> 7.44%

Appendix "B"

Pit No. 7

Rotap analysis — 3 minutes on 200 grams.

Heads

AFTER Denovan Fiberizer

Mesh	Total	Rock	Fibre
6	5.1	5.1	
8	5.1	5.1	TR
10	9.3	9.2	.1
20	33.2	33.0	.2
35	46.7	44.0	2.7
65	47.4	38.2	9.2
150	31.6	28.7	2.9
Pan	22.1		
	200.5		15.1

% Fibre 7.55%
Less 150 mesh 6.1 %

Undersize Denovan Screen

Mesh	Total	Rock	Fibre
6			
8			
10	.3	.3	
20	.4	.4	
35	10.0	.4	9.6
65	73.0	15.0	58.0
150	67.1	66.2	.9
Pan	50.3		
	201.1		68.5

% Fibre 34.25%
Less 150 mesh 33.7 %

REPORT ON BULK SAMPLING continued

Undersize No. 6 Screen

— NO TEST —

Pit No. 7

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Tailings

Mesh	Total	Rock	Fibre
6			
8	.6	.6	
10	1.9	1.9	
20	12.5	12.5	TR
35	24.5	23.8	.7
65	64.7	45.4	19.3
150	55.0	49.7	5.3
Pan	41.1		
	<hr/> 200.3		<hr/> 25.3

% Fibre 12.6%

Less 150 mesh 10.0%

Dust

Mesh	Total	Rock	Fibre
6			
8			
10			
20	.8	.7	.1
35	15.0	12.9	2.1
65	67.5	51.3	16.2
150	71.8	66.7	5.1
Pan	44.4		
	<hr/> 199.5		<hr/> 23.5

% Fibre 11.75%

Less 150 mesh 9.2 %

Appendix "C"

Pit No. 8

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Heads

Mesh	Total	Rock	Fibre
6	2.9	2.9	TR
8	2.2	2.2	TR
10	4.4	4.3	.1
20	24.1	23.6	.5
35	47.8	42.3	5.5
65	55.0	40.6	14.4
150	30.8	28.6	2.2
Pan	23.2		
	<hr/> 200.4		<hr/> 22.7

% Fibre 11.35%

Less 150 mesh 10.25%

Undersize Denovan Screen

Mesh	Total	Rock	Fibre
10			
20	TR	TR	TR
28	0.1	----	0.1
35	5.5	----	5.5
65	74.7	35.3	39.4
100	37.0	11.4	25.6
Pan	82.4	82.4	
	199.7		70.6
% Fibre 35.3%			
Less 100 mesh 22.5%			

Undersize No. 6 Screen

Mesh	Total	Rock	Fibre
10			
20	0.6	0.6	TR
28	2.1	2.1	TR
35	9.7	9.2	0.5
65	74.2	49.4	24.8
100	35.3	29.0	6.3
Pan	76.4	76.4	
	198.3		31.6
% Fibre 15.8%			
Less 100 mesh 12.6%			

Pit No. 8

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Tailings

Mesh	Total	Rock	Fibre
10	0.7	0.7	----
20	7.3	7.3	TR
28	7.5	7.5	TR
35	13.7	13.3	0.4
65	64.2	46.8	17.4
100	33.7	24.9	8.8
Pan	71.1	71.1	
	198.2		26.6
% Fibre 13.3%			
Less 100 mesh 8.9%			

Dust

Mesh	Total	Rock	Fibre
10	1.0	1.0	TR
20	10.7	8.2	2.5
28	11.2	6.5	4.7
35	20.9	13.0	7.9
65	62.6	45.3	17.3
100	24.9	20.3	4.6
Pan	68.9	68.9	
	200.2		37.0
% Fibre 18.5%			
Less 100 mesh 16.2%			

REPORT ON BULK SAMPLING continued

Appendix "D"

Pit No. 9

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Heads

Mesh	Total	Rock	Fibre
6	7.9	7.9	TR
8	7.8	7.8	TR
10	12.2	12.2	TR
20	40.2	40.0	.2
35	43.3	41.8	1.5
65	38.9	34.0	4.9
150	28.7	27.9	.8
Pan	21.5		
	<hr/>		<hr/>
	200.5		7.4

% Fibre 3.7%
Less 150 mesh 3.3%

Undersize Denovan Screen

Mesh	Total	Rock	Fibre
6			
8			
10	.5	.5	
20	.4	.4	TR
35	10.1	.5	9.6
65	66.8	15.7	51.1
150	63.4	62.2	1.2
Pan	59.7		
	<hr/>		<hr/>
	200.9		61.9

% Fibre 30.95%
Less 150 mesh 30.3 % (about 80% of this material)

Undersize No. 6 Screen

Mesh	Total	Rock	Fibre
6	.4	.4	
8			
10	.1	.1	
20	.3	.3	
35	18.1	16.7	1.4
65	69.4	58.0	11.4
150	68.8	67.1	1.7
Pan	42.7		
	<hr/>		<hr/>
	199.8		14.5

% Fibre 7.25%
Less 150 mesh 6.4 % (about 10% of this material)

Pit No. 9

Rotap analysis — 3 minutes on 200 grams.

AFTER Denovan Fiberizer

Tailings

Mesh	Total	Rock	Fibre
6	.3	.3	
8	.9	.9	TR
10	2.9	2.9	TR
20	17.4	17.4	TR
35	36.5	36.3	.2
65	62.8	50.5	12.3
150	46.1	43.8	3.3
Pan	33.1		
	<hr/> 200.0		<hr/> 15.8

% Fibre 7.9%
Less 150 mesh 6.2%

Dust

(Quebec Department of Mines Report)

BEFORE Denovan Fiberizer

Weight of sample	101.5 lbs.	
Weight of fibre	120.9 oz.	
Grade	Weight	%
6D	48 oz.	2.96%
7T	72.9 oz.	4.48%
		<hr/> 7.44%

QUEBEC HOLDINGS

Horizontal Projection — D.D.H. Nos. 1 to 45

Hole No.	Degree	Overb.	Serp.	O.R.
1	90°	-----	-----	-----
2	45°	17.7'	Gr. 10.6' — 95.5'	-----
3	45°	10.6'	129'	-----
4	90°	-----	-----	-----
5	45°	6.35'	62'	-----
6	45°	12.7'	95.5'	-----
7	90°	-----	-----	-----
8	45°N	6.02'	212'	-----
8A	45°	9.9'	16.2'	-----
9	45°	8.5'	195'	-----
10	45°	8.5'	204'	-----
11	45°	17.5'	286'	-----
12	45°	16.9'	189'	-----
13	45°	12.7'	143'	-----
14	45°	8.5'	129'	-----
15	45°	44'	-----	-----
16	45°	17'	34'	-----
17	45°	14'	9'	-----
18	45°	0'	246'	-----
19	45°	13'	192'	-----
20	45°	16.25'	294'	7.07'
21	45°	10.6'	198'	-----
22	45°	29.7'	124'	31.4'
23	45°	15.6'	203'	1.4'
24	45°	17.0'	159'	12.7'
25	45°	28.3'	288'	-----
26	45°	63.6'	202'	-----
27	45°	53.0'	238'	-----
28	45°	33.9'	306'	7.07'
29	45°	10.6'	344'	-----
30	45°	17.7'	336'	-----
31	45°	38.9'	100.5'	143.5'
31A	45°	9.9'	131'	-----
32	45°	7.77'	261'	14.1'
33	45°	63.5'	32'	-----
34	45°	58.0'	112'	44.5'
35	45°	12.0'	274'	-----
36	45°	11.3'	121'	110.0'
37	45°	6.35'	206'	-----
38	45°	18.4'	220'	-----
39	60°	7.5'	93.5'	-----
40	45°	10.6'	Gr. 46 — 191'	-----
41	45°	19.8'	234'	-----
42	45°	7.07'	220'	37.4'
43	45°	16.9'	210'	-----
44	45°	31.1'	218'	5.65'
45	45°	17.7'	196'	-----





